

Appl. No. 09/902,056
Amdt. dated October 28, 2003
Reply to Office Action of August 27, 2003

REMARKS/ARGUMENTS

Claims 26,27, and 32-36 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Gnade et al.* (U.S. Patent No. 5,561,318).

Claims 26 and 32 have been amended to include the feature of the structural characteristics imparted to the composition of the porous material with a *dry* process. Applicant believes the additional claim features of "a nanoporous material deposited with a dry process" and "wherein the nanoporous layer has a continuous range of density that decreases as the nanoporous layer tends closer to the substrate," are not anticipated by the cited reference. Applicant believes these amendments are support by the Specification and contain no new matter.

Applicant respectfully reiterates that the reference cited by Examiner does not anticipate Applicants' newly amended claims. *Gnade et al.* builds a structure with a wet process that "can include applying and gelling one or more solutions between and over conductors 24 and drying the wet gel to create at least porous dielectric sublayers 28 and 29. By varying the composition of the solutions, gelling conditions, drying temperature, composition of the solvents in the wet gel, or a combination of these approaches, the porosity of the sublayers may be tailored individually. A non-porous dielectric layer 30 may be formed over porous layer 28, which may complete an interlayer dielectric (Abstract)."

In contrast with *Gnade et al.*, Applicant's claimed invention is a structure of built of a *dry* process (using plasma techniques). The *dry* process imparts distinctive structural characteristics not anticipated by *Gnade et al.* The porous layer deposited on the substrate is a *single* material that is densified to form regions of higher density that are more distant from the substrate. The densified region forms a nanoporous layer has a *continuous* range of density that increases as the nanoporous layer tends farther from the substrate. These higher density regions facilitate the contact with the cap layer that is deposited thereon. *Gnade et al.* involves using different compositions of wet gels. The invention enables the "adhering a layer of cap oxide with an incompatible layer of nanoporous silica. (Page 1, lines 4-5)."

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MPEP §2113 states

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979)

In light of the above, Applicant respectfully asserts that the Office Action's "product by process" assertion does not apply. Furthermore, *Gnade et al.* does not teach all of the elements of Applicant's newly amended claims. As outlined in MPEP §2131,

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently describe in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as contained in the ...claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim.

Applicant believes he has addressed the Examiner's concerns. Therefore, the claims, as amended, are now allowable over the cited reference. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Please charge any fees other than the issue fee and credit any overpayments to Deposit Account 14-1270.

Respectfully submitted,

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